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ABSTRACT

This report describes the functions teachers attribute to their lesson plans submitted to supervisors, and their private, unsubmitted, written plans. Sixteen experienced mathematics and English teachers in two secondary schools participated. All teachers in one school were required to submit written plans on a weekly basis; in the other school, no written plans were required in mathematics, and a monthly report was required in English. Categories for functions of written submitted plans included: (1) aid for decision making functions; (2) log of past lessons; (3) reminders--checking either the topic or homework for the day; (4) a synopsis of instructional lessons to meet the requirements of the supervisor; and (5) weekly and long-term scheduling. The functions of teachers' unsubmitted plans were; (1) drawing-board outlines; (2) mapping and reminding; (3) scheduling; (4) logging accomplishments. Descriptions are given of how the teachers used these planning procedures, their reasons for using them, and their perceptions of how submitted plans contributed to communication with their supervisors. Implications are discussed for future research on this topic along with implications for the practice of planning as an enhancement of teacher effectiveness. (JD)

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MAPPING THE INSTRUCTIONAL JOURNEY: THE WRITTEN PUBLIC AND PRIVATE PLANS OF SECONDARY TEACHERS OF MATHEMATICS AND ENGLISH

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INTRODUCTION

Overview

Ascertaining and describing the functions (purposes) that written plans serve for secondary school teachers of mathematics and English was one of the objectives of a larger study (Pennella, 1985) of teachers' written lesson plans. The objective of this paper is to report findings and researcher comments regarding the functions of written plans which are submitted to supervisors (public) and the functions of written plans which are unsubmitted to supervisors (private). A set of four categories are used to describe the functions of submitted plans and five categories describe the functions of unsubmitted plans.

Background

Bobbit (1918), Taba (1962) and other educational theorists have stressed the importance of teacher planning as a necessary component of effective instruction. Jackson (1966) was fascinated by the prospect of teacher planning research as a source for increasing knowledge regarding teaching behavior.

The literature regarding teacher planning through 1969 was devoted to theoretical prescriptions for planning. The dominant model for planning was Tyler's (1950) rational approach. The specification of objectives, followed by the selection and organization of activities, preceded the evaluation of the learner's attainment of the objective. This model was later developed by Taba (1962) and Popham (1970).

The sixties saw this rational model challenged. Particular criticism was directed toward its emphasis upon the setting of objectives. Eisner (1967) comments that: "The amount, type and quality of learning that occurs in a classroom, especially when there is interaction among students, are only in small part predictable" (p. 254). Further, certain content areas do not lend themselves to the setting of precise learner objectives. MacDonald (1965) argues that the activity is more than a means to an end. It may be an end in itself. In MacDonald's prescription "the teacher in actuality asks a fundamentally different question from 'What am I trying to accomplish?'

The teacher asks, 'What am I going to do?' and out of doing comes accomplishment" (p. 614.).

Jackson's call for research coupled with the planning model controversy served as motivating factors for the first empiric studies which began in 1970. The studies in the past 15 years have addressed three major questions:

(1) How do teachers plan?
Much of this research has been directed toward developing a greater understanding about how teachers make decisions about what they are going to teach and about how they are going to teach it (Zahorik, 1975; Morine & Vallance, 1975; Morine-Dershimer, 1976; Yinger, 1978; Peterson, Marx, & Clark, 1978; Clark & Yinger, 1979, 1980).

(2) What effect does planning have on teacher effectiveness?
This research has focused on the effect of planning on student outcomes. It has been directed toward ascertaining the relationship of the planning process to subsequent interactive teacher thoughts and actions which in turn affect student behavior (Peterson, Marx, & Clark, 1978; Clark & Joyce, 1979).

(3) Why do teachers plan?
This research has investigated what teachers' purposes are when planning (Clark & Yinger, 1979; McCutcheon, 1980).

The findings which address these questions have increased what Clark (1983) calls propositional knowledge. This type of knowledge is not prescriptive but rather definitional and conceptual. "Propositional knowledge provides us with the conceptual categories useful as we organize, visualize, make sense of, and communicate about complex experiences like teaching" (p.4). This type of knowledge has been developed through descriptive studies which depend heavily upon reflection and self-report by teachers.

Since teacher planning is a recent topic for research, several factors or limitations are especially pertinent.

(1) Few studies have been done at the secondary level.

(2) Few studies have focused on the formal written plan in spite of its widespread usage.

(3) Content area specialization is a significant organizational feature in secondary schools, yet there

has been little focus on teacher planning for particular subjects.

(4) There is a lack of data on the meanings that teachers attach to written plans, whether submitted (public) or unsubmitted (private).

The study of teacher plans is considered significant for its potential impact on instruction. Joyce (1978-79) makes this significance clear in his study of teacher thinking.

> If we postulate that teaching is done in an extremely unstructured situation where a framework of attention has to be imposed, it is probable that the kinds of 'attention focusing' structures that are developed by teachers will have a considerable effect on the kinds of stimuli which they believe are relevant (p. 67).

The written lesson plan may well provide such an attention focusing structure.

Clark & Yinger (1980) point out that most efforts at improving instruction and learning continue to be directed at interactive and curricular techniques and strategies. "Little or no effort has been put into improving instructional planning and deliberation, which in our opinion, constitute the core of teaching as a profession" (p. 14). One impediment to developing alternative written planning formats or models is the lack of studies which are "grounded in teachers' concepts and language" (R.J. Shavelson, personal correspondence, June, 1981.)

The study reported herein uses teacher plans and multiple teacher interviews to describe the functions, (purposes) that teachers attribute to their public (submitted to supervisors) and private (unsubmitted to supervisors) written plans. It is hoped that the findings and conclusions may provide a better understanding of planning, particularly, as it exists within the secondary school.

METHODOLOGY

Four experienced teachers (minimum = 7 years) from the mathematics and English departments of two suburban New Jersey secondary schools (N=16) participated in four semi-structured interviews throughout the 1983-84 school year. Samples of the teachers submitted and unsubmitted written lesson plans were collected, analyzed and discussed with the teachers in the interviews. Tentative sub-

categories were developed, using the methodology presented by Guba and Lincoln (1981). Following the analysis of all audio-tapes for interviews one and two and after the analysis of all written plans in the first school, data collection methods were repeated in the second school and analysis of data was done to determine the fit and appropriateness of the tentative sub-categories.

During the third interview, all sixteen teachers completed a sorting task which required the participants to spend tokens on each of the sub-categories. The task was designed to act as a catalyst wherein teachers would recognize categorical redundancies, inconsistencies, and omissions. Teachers were instructed to talk aloud about their understanding regarding the meaning of each category as they completed the task. Subsequent collapsing of categories was enhanced by this member checking exercise. Generalizations were subjected to the rules of analytic deduction (Robinson, 1951, Denzin, 1978). Negative or incongruent cases were reported as discrepancies requiring further investigation.

During the fourth and final interview teachers were asked to comment upon and place themselves within the major categories. Subsequent refinement of categories followed this interview.

Supervisors cooperated as informants to aid in the corroboration of data and to provide additional insights regarding the socio-political environment of the school i.e. rules regarding planning, accepted formats and the like.

FINDINGS

Overview

All teachers in one of the two schools (School A) were required to submit written plans on a weekly basis prior to the instruction. Each of the teachers in School A stated that if they were not required to submit plans, they would complete some form of written plans regardless of the requirement. This contention was supported in School B where no written plans are required in mathematics and where a monthly report regarding the previous month's instruction is required in English. The eight teachers in School B employed some form of written planning (unsubmitted) prior to instruction in spite of the fact that no predictive plans were required.

The differences in planning requirements (See Table 1) offer a wider perspective for the understanding of written teacher plans, however, data arrays should be read with regard to the specific planning requirements in School A and School B.

Two sets of categories for the functions or purposes of written plans emerged from the data. The categories: aid for decision making, log of past lessons, reminder, report, and schedule are employed to describe the functions of submitted written teacher plans. The categories: drawing board, map, log, and schedule describe the functions of unsubmitted written plans. The latter four functions are accompanied by sixteen sub-categories.

Tables 2, 3, 4 and 5 contain each teacher's responses to the sorting exercise of Interview III where each participant "spent" ten and twenty-two tokens on the submitted and unsubmitted functions respectively. More tokens were placed on functions that the teachers felt were most met by their written plans. The numbers in each cell represents the number of tokens placed by each function. Each teacher participant is identified by school (A or B) and department (M or E) and is given a numerical designation of 1, 2, 3, or 4; for example, AM1.

Categories for Functions of Written Submitted Plans

The categories below are based on the data gathered from the eight participants in School A. English teachers in School B who submit post-instructional or retrospective plans also sorted and critiqued the categories. The School B English teachers' critical comments are reflected in the description of the categories below and their sorting decisions are arrayed in Table 3.

I. Aid for Decision Making Function.

The subject of teacher decision making of itself constitutes a separate body of planning research. The data in this study supports previous findings that the complex process of teacher problem finding and problem formulation/ solution (Yinger, 1978) is only committed to paper in the vaguest of terms (Morine & Vallance, 1975; Morine-Dershimer, 1979; Clark & Yinger, 1979; McCutcheon, 1980;) and that the planning process may exceed the value of the product. These decisions are less discernible within the submitted plan than within other unsubmitted written teacher artifacts. Nevertheless, the teachers in School A, where predictive submitted plans are required, credited the function of assisting them to make decisions with more than

Table 1

School Requirements for Submitted Plans

School	Department	Required	Before or After Instruction	Period Covered
A	Math	Yes	Before	One Week
A	Eng	Yes	Before	One Week
B	Math	No	------	--------
B	Eng	Yes	After	One Month

Table 2

Results of Sorting Task: School A Teacher's Attribution of Relative Importance of the Functions of Submitted Plans

Teachers (A=school; M=Math; E=English)

	AM1	AM2	AM3	AM4	(TOTAL)	AE1	AE2	AE3	AE4	(Total)
Function										
Aid for Making Decisions	3	3	4	4	(14)	1	1	3	4	(9)
Log of Past Lessons	4	3	0	3	(10)	3	5	3	0	(11)
Reminder	1	2	2	1	(6)	1	2	1	3	(9)
Report	1	2	2	1	(6)	2	1	0	0	(3)
Schedule	2	1	0	1	(4)	3	1	3	3	(11)

Table 3

Results of Sorting Task: School B Teacher's Attribution of Relative Importance of the Functions of Submitted Plans

Teachers (B=School; E=English)

	BE1	BE2	BE3	BE4	(TOTAL)
Function					
Aid for Making Decisions	0	0	2	0	(2)
Log of Past Lessons	5	4	3	0	(12)
Reminder	0	0	0	0	(0)
Report	2	4	3	10	(19)
Schedule	3	2	2	0	(7)

three times the importance (See Table 2) of the submitted plan's explicit purpose, i.e. to be a report to their supervisor.

It appears that the submitted plan, when written as a predictive plan, assists teachers to consistently make four decisions as evidenced in the oral statements and written documents. These decisions are 1) topic or content; 2) homework; 3) materials (literary work, problems, text section number, worksheets, and the like); 4) number of days needed for a topic, and in some instances, an activity. It should be noted that test days are also regularly listed but were not readily volunteered as a decision without interviewer prompting. While teachers gave oral and written evidence in their unsubmitted plans that student ability was taken into consideration, this decision seemed invisible as it related to the submitted plan.

Definition--The aid for making decisions is a means of noting and making visible specific instructional options which the teacher expects will be effective in the classroom situation.

Examples of Teacher Statements

"I never have to have the planbook in my hands, it is the writing of it that's useful."

* * *

"I can sit down on a Thursday and make decisions about where to go, how much time I'll spend and which problems I'll assign."

* * *

". . . it's like a path of bread crumbs to some extent. It doesn't necessarily cover everything you want to do or talk about along the way, but it does lead you on the way. And I think that's fine."

Example of Statements from the Teacher's Submitted Plans

1. Check HW
2. Quiz
3. Pg. 246 Intro
4. Rectangular solids

5. HW pg. 248 (1-25)

* * *

Begin "The Scarlet Letter"

Ch. 1 & 2

Assign Ch. 3

II. Log of past lessons.

The retrospective use of submitted plans was regarded by six of the eight teachers as having at least secondary importance to the role of the plan as an aid to decision making. (Note: Two teachers placed no tokens in the section marked "log". One of these teachers does not re-use any written plans and the other assigns all logging to his unsubmitted plans; See Table 2).

Teachers reported looking back to assess what had been covered before writing a test. They indicated that the planbook documents coverage and homework in order to assist them to inform parents and students about missed work following a student absence. One teacher reported looking back as far as six years to compare his students' performance to a similar group. Old plans are used to help make predictions for current classes and thereby aid in the decision making function anew. In the shorter term, teachers use the submitted plan retrospectively to monitor themselves in order to ensure that they have covered everything, particularly when they are teaching multiple sections of the same course. Teachers also report editing the planbook to reflect changes from the submitted plan.

Definition--The log of past lessons is a record or journal which documents the daily, weekly, unit, term or yearly plan.

Examples of Teacher Statements

> "The planbook is important to keep in perspective of where you are throughout the year ... to be sure you're accomplishing goals in the time limit."

* * *

> "I look back and I can see that last year I was ahead of this year. It is typical for me to reflect on my old planbooks to check my pace."

* * *

"The plan serves as a prompt in that it helps me only to understand precisely where I left off the day before. Other than that it has no value to me at all. This is simply a requirement of the administration."

Examples from the Teacher's Submitted Plans

Previous and subsequent examples all may be related to this function.

III. Reminder.

The primary purpose of consulting the submitted plan as a reminder is to check either the topic or homework for the day. Teachers indicated that there are three points when this reminding function comes into play: 1) in the morning when the teacher is organizing materials for the day; 2) immediately before entering a class; or 3) during the class when making a transition to a new topic or activity or when assigning homework.

Definition--The reminder is a prompt to awaken remembrance.

Examples of Teacher Statements

"I look at them at the beginning of the period to refresh my mind about the topic, pages or activity. I'd say I consult them maybe two out of five days."

* * *

"In the morning I sketch out the lesson on paper (unsubmitted plans) and I look at the planbook to get the assignment for the day."

* * *

"The plan jogs my memory. It gives me the page number to get started."

Example from Teacher's Submitted Plans

The example above listing homework and topic serves as an example for this function also.

IV. Report.

In spite of the overt functions of the submitted plan as a report to supervisors, the teachers in this study did not place great importance in the reporting function. The teachers reported that the submitted plan provides a means for informing supervisors that the curriculum is being followed and that the pace of coverage is satisfactory.

Definition--The report is a synopsis of the instructional lesson to meet the requirements of the supervisor.

Examples of Teacher Statements

> "My perception is that the administration uses them to check that what is supposed to be taught is being taught and that it's being taught at the right pace."
>
> * * *
>
> "My plans reveal the topic and the homework. If someone wants to know more they would have to ask or observe my class."

Examples from Teacher's Submitted Plans

> The example above listing homework, topic, quiz serves as an example for this function.

V. Schedule.

There are two types of scheduling that the teachers attributed to the submitted plan. The first is a flexible calendar of events wherein the teacher plans events beyond the weekly scope of the required submitted plan. Early in the school year, the teacher might project dates for a unit as far ahead as June. This unit plan form of the flexible schedule emphasizes the students' pacing of the coverage rather than emphasizing the dates as a fixed entity. Only one teacher employed this type of unit plan.

Members of the English department were far more likely to employ this type of flexible longer term schedule as resources had to be shared such as video-tapes and novels. Further, this type of planning is fostered by the department supervisor. Mathematics teachers indicate that teacher's texts often provide either explicit or implicit long term plans.

Three mathematics teachers employed fixed schedules wherein an event is marked in the planbook which is not likely to be altered. These teachers entered fixed dates in September, thereby using the planbook as a calendar

which includes holidays, meetings, and state testing dates. Two mathematics teachers assigned each school day a number from 1 to 180 for comparison of coverage and pace in subsequent years.

Definition--The schedule is a calendar of events

Examples of Teacher Statements

"In September, I write in all the meetings for the whole year and all days off. I put the number of the day in each block." (Fixed)

* * *

"By November, I know my kids. I then sit down and plan the major topics and activities for the rest of the year." (Flexible)

* * *

Examples from Teachers Submitted Plans

(Fixed) 2/6

Day 104 Faculty Meeting/Grades Due

(Flexible) Videotape: Macbeth (This item appeared in a position in relation to all other topics but did not have a date set until about one week before actual instruction--date then appeared on an acetate overlay)

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Functions of Unsubmitted Written Plans

All 16 respondents used some written plan beyond those, or in place of those, submitted to supervisors. In many cases, the teachers were unaware of the extent or elaboration of the plans that they developed. Some of the teachers held on to these plans from year to year; others discarded all written planning material after teaching a particular class. Systems of organization ranged from quickly scribbled lunchroom napkin notes to elaborately detailed notebooks. No sense of ambivalence or negativity was detected regarding the use of notes. Teachers saw both the product and process of writing unsubmitted plans as worthwhile. The respondents' verbal statements and written documents provide data which have been arranged into a set of categories and sub-categories to describe the functions of unsubmitted written plans.

Certain functions may be attributed to both the submitted and unsubmitted plans in School A depending on the lesson or the teacher. Teachers in School B are not required to prepare submitted plans prior to instruction hence functions which are not apparent in teachers from School A's unsubmitted plans appear in School B's teachers' unsubmitted plans. An example of this is the function of keeping a log for the year. In School A, the planbook serves as the log or journal. In School B, the mathematics teachers add greater emphasis to this function in their unsubmitted plans than the teachers in School A and than their colleagues in the English department who complete summary sheets for submission on a monthly basis.

In summary, the context appears to affect the importance of the unsubmitted plan's functions as well as affect the submitted plan's functions. The weighted importance of these functions is more crucial for auditability and as a catalyst to enhance respondent clarity than for its particular impact on the reported findings since the central purpose is to elucidate these functions rather than to demonstrate their weighted importance. However, since the sorting technique posed the decisions in terms of importance in order to enhance respondent clarity, the scores included in Tables 4 and 5 should be read with the above in mind.

TABLE 4

Results of Sorting Task: School A&B—Teacher's Attribution of Relative Importance of the Functions of Unsubmitted Plans
Teachers (A or B= School; M=Math; E=English)

FUNCTION (CATEGORY AND Sub-Category)	AM1	AM2	AM3	AM4	BM1	BM2	BM3	BM4	AE1	AE2	AE3	AE4	BE1	BE2	BE3	BE4
Aid for Making Decisions About Content and Time	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Aid for Making Decisions About Content and Students	3	1	2	2	2	2	3	3	3	3	3	1	2	3	2	3
Aid for the Teachers Study of Content	3	2	3	3	2	2	0	1	3	3	3	3	2	4	2	1
Means of Personalizing Material	3	3	3	1	0	2	0	0	2	1	3	0	2	1	2	0
Outlet for Creativity	1	1	3	1	1	2	1	3	2	1	0	1	1	2	1	2
Synthesizer	1	2	1	2	4	3	0	2	1	2	1	3	1	1	1	2
I DRAWING BOARD	11	9	12	9	9	11	4	9	11	10	10	8	8	11	8	8

Table 4 (continued)

	AM1	AM2	AM3	AM4	BM1	BM2	BM3	BM4	AE1	AE2	AE3	AE4	BE1	BE2	BE3	BE4
Means of Focusing or Highlighting Important Points	3	2	2	2	1	0	2	1	3	2	3	4	2	3	2	2
Check of Student Work Compared To Teacher's Answers	2	1	0	0	0	2	0	2	0	0	0	0	0	1	0	0
Place Holder	1	1	0	1	0	0	3	0	0	2	0	0	1	1	1	0
Reminder to Trigger Action on the Day of a Given Class	0	2	3	1	0	2	3	1	1	2	2	0	1	0	1	1
II MAP	6	6	5	4	1	4	8	4	4	6	5	4	4	5	4	3
Flexible Schedule of Unit Year or Semester	0	0	0	0	0	0	2	1	0	0	1	3	1	0	0	0
Fixed Schedule of the Unit, Year, or Semester	0	0	1	0	2	1	1	1	1	1	1	3	1	0	1	0
III SCHEDULE	0	0	1	0	2	1	3	2	1	1	2	6	2	0	1	0

Table 4 (continued)

	AM1	AM2	AM3	AM4	BM1	BM2	BM3	BM4	AE1	AE2	AE3	AE4	BE1	BE2	BE3	BE4
Log of Suggestions for the Modification of a lesson in the Future	2	2	2	1	1	1	0	3	3	2	2	2	2	0	2	3
Log of the Week, Unit, Semester or Year	0	1	0	2	5	1	3	1	1	1	2	0	2	2	1	0
Record of Difference of Actual Instruction from That Described in the Predicted Plan	1	1	1	3	0	1	2	0	0	0	0	0	2	0	2	1
Record of Good Problems or Ideas To Be Saved For Future Lessons	2	2	1	2	4	3	0	3	1	2	0	2	1	2	2	2
Status Check of Items Covered in a Given Period	0	1	0	1	0	0	4	2	1	0	1	0	1	2	2	2
IV LOG	5	7	4	9	10	6	9	9	6	5	5	4	8	6	9	8

TABLE 5

Totals of Sorting Task by Departments: School A&B—Teacher's Attribution of Relative Importance of the Functions of Unsubmitted Plans

Teachers (A or B=School; M=Math; E=English)

	AM	BM	MATH	AE	BE	ENGLISH
FUNCTION						
(CATEGORY AND Sub-Category)						
Aid for Making Decisions About Content and Students	8	10	18	10	10	20
Aid for the Teachers Study of Content	11	5	16	12	9	21
Means of Personalizing Material	10	2	12	6	5	11
Outlet for Creativity	6	7	13	4	6	10
Synthesizer	6	9	15	7	5	12
I DRAWING BOARD	41	33	74	39	35	74
Means of Focusing or Highlighting Important Points	9	4	13	12	9	21
Check of Student Work Compared To Teacher's Answers	3	4	7	0	1	1
Place Holder	3	3	6	2	3	5
Reminder to Trigger Action on the Day of a Given Class	6	6	12	5	3	8
II MAP	21	17	38	19	76	35

Table 5 (continued)

	AM	BM	MATH	AE	BE	ENGLISH
Flexible Schedule of Unit Year or Semester	0	3	3	4	1	5
Fixed Schedule of the Unit, Year, or Semester	1	5	6	6	2	8
III SCHEDULE	1	8	9	10	3	13
Log of Suggestions for the Modification of a lesson in the Future	7	5	12	9	7	16
Log of the Week, Unit, Semester or Year	3	10	13	4	5	9
Record of Difference of Actual Instruction from That Described in the Predicted Plan	6	3	9	0	5	5
Record of Good Problems or Ideas To Be Saved For Future Lessons	7	10	17	5	7	12
Status Check of Items Covered in a Given Period	2	6	8	2	7	9
IV LOG	25	34	59	20	31	51

Table 4 contains the subcategories for each of the four major categories; drawing board, map, log, and schedule. The subcategories are listed in upper and lower case letters. The major categories are capitalized and designated by Roman numerals. The numbers in the functions of submitted plans. (The reporting function of submitted plans is, of course, not reflected in the unsubmitted plans.) By comparison with the submitted functions, what emerges is a richer and more internally diversified set of four categories.

The data indicate that the unsubmitted plans are functional as a "log" and as a "schedule", thus complementing or supplanting these functions in the submitted plan. The two other categories of "drawing board" and "map" are somewhat similar to the submitted plan's functions of "aid to decision making" and "reminder". The categories of "drawing board" and "map" reflect the richness and diversity in the teacher's attribution of functions as described in the sub-categories below.

Each category is discussed in terms of the metaphor of documents which might assist a traveler. The researcher struggled to find language to adequately depict these categories. The use of the metaphor of the preparation and use of written documents for a journey lends itself to the task of elucidating the functions of unsubmitted written documents used for instruction. The category is presented below along with the sub-categories sorted by the teachers. The sub-categories are based on the data from the written artifacts and the first two interviews. Examples of teacher statements associated with each sub-category and examples of the type of artifact used to accomplish the function are also included in order to describe the four major categories as clearly as possible.

I. The Drawing Board Function.

Definition--The drawing board function serves as a work-sheet to outline instructional problems and their possible solutions.

Sub-categories

--Aid for Making Decisions about Content and Time

--Aid for Making Decisions about Content and Students

--Aid for the Teacher's Study of Content

--Outlet for Creativity

--Means of Personalizing the Material

--Synthesizer

Metaphor--In order to describe this category according to the metaphor of written documents used for a journey, it is useful to think of some of the journeyer's possible concerns. "Have I made this trip before?"; "How much time do I have?"; "How much time do I need?"; "How can I make this journey most satisfying and rewarding for me and those accompanying me?"; "What is the best route?"; "In case of an emergency, what is an alternate route?" are some of the myriad questions that affect the problem formulation and possible solutions.

Discussion--The category called "drawing board" is the most difficult to explain since it exists as a tip of an iceberg which is the teacher's mind. It is not the domain of this study to delve into the decision making process, yet some understanding of this process is necessary to clearly articulate the way that the unsubmitted written plan assists teachers to make manifest components of or solutions to the instructional problems they encounter.

Yinger's (1978) perceptive study of the problem conception of the elementary school teacher whose cognitive processes he studied, provides a description of the problem-finding process.

> Problem finding. Problem finding is the process by which someone becomes aware of a specific problem that needs to be solved within a general, non-specified problem situation. In the context of teacher planning, problem finding refers to the discovery of a potential instructional idea that requires further planning and deliberation. This idea is referred to as a problem since, at this early stage, the teacher still doesn't know if this idea can be realized in the classroom and, if so, how it will be implemented. (pp. 27-28)

Yinger states that the way in which a teacher conceives the instructional problem is affected by a discovery cycle. The discovery cycle is the interaction of a) teacher knowledge and experience; b) teacher goal; c) materials and d) the planning dilemma. The planning dilemma is composed of three factors which are: a) environment and organization;

b) curriculum and resources; c) pupil characteristics. These factors may be similar within a school, yet planning becomes unique for each teacher since the problem conception is affected by the teacher's unique discovery cycle.

The data from the secondary teachers regarding the drawing board function indicate that written unsubmitted plans document aspects of the problem conception which deal with the general teaching dilemma.

Subcategory 1 of Drawing Board--Aid for the Study of Content

Typical planning document used--Outline, Notes

Example of teacher statements

"Sometimes I'll write the problem and solve it several times so I can present it without a hitch."

* * *

"I research a topic and take notes before attempting to teach a class."

* * *

Subcategory 2 of the drawing board function--Outlet for Creativity

Typical planning document used--Notebooks, Notes, Annotated Text, Drawings.

Examples of teacher statements

"I have the ability to see a good way to teach something in certain situations. I come up with my own examples that I jot down."

* * *

I'll sketch an idea that I think will work, I use it, then I throw it away.

* * *

Subcategory 3 of the drawing board function--Means of Personalizing Material

Typical planning document used--Notes

Examples of teacher statements

"If a publisher annotated the same text, I'd probably use my materials or notes anyway because I trust my own thoughts more."

* * *

My handwriting makes it easier for me to recall and be spontaneous.

Subcategory 4 of drawing function--Aid for Making Decisions about Content and Students

Typical planning document used--Notes, Worksheets, Outline

Examples of teacher statements

"I make notes on the best way to present it to the kids."

* * *

"You try to organize the lesson and especially the introduction in the easiest and most effective way for the students to understand...(that's why)...I write more for the introduction than other parts of the lesson."

* * *

Subcategory 5 of drawing board function--Synthesizer
Typical planning document used--Notes, Worksheets

Example of teacher statement

"I take examples from several sources and put them in my notes."

Subcategory 6 of drawing board function--Aid for Making Decisions About Content and Time

Typical planning document used--Calendar, Personal Block Plan, Notes

Example of teacher statements

"I decide what I want to teach next week, then I think about how much time I'll need for each topic, then I write down the topic for each of the days and

fill in whatever else I think I'll need to teach the lesson smoothly."

II. The Mapping Function.

Definition--The mapping function serves as a written document which is used by the teacher to remind or guide him or her regarding the decisions made about instructions which are to be carried out in the classroom.

Sub-categories:

--Means of Focusing or Highlighting Important Points
--Check of Student Work Compared to Teacher's Answers
--Place Holder
--Reminder to Trigger Action of the Day of a Given Class.

Metaphor--Depending on how familiar a journeyer is within a given geographic setting, a map may be more or less necessary. Gradually, a journeyer can lay out short cuts, more scenic routes, and can in fact, come to detours and change direction with facility. Maps take on many forms, a single word can highlight a crucial landmark, or some trips may require an elaborate set of directions wherein the order of the turns and possible obstacles need to be clearly spelled out and options must be prescribed.

Discussion--The mapping function is similar for teachers. Teachers report extensive written plans that were common during their early years and which might still be necessary should the students and material be particularly challenging. As teachers become more experienced, one sentence or phrase triggers developed routines.

Two sub-categories under the mapping category yielded only slight attention by teachers during the sorting exercise. They were the functions of place-holder, wherein teachers marked the plan to indicate what had to be covered so that they knew precisely where to begin on the following day. And secondly, the use of the written plan to compare teacher prepared answers with those of the students.

The most significant use of the mapping function is the use of the unsubmitted plan to highlight or focus important points. This sub-category is discrete

from those listed under the "drawing board" function when the use is situated within the classroom. Annotated texts and hand held notes cue teachers regarding appropriate routines, questions, problems, sequence, and the like. They help teachers to avoid missing important points if they are distracted or if they are teaching multiple sections of the same class. These maps are often edited as the class is underway when a better idea is suggested or discovered during the instructional period.

Subcategory 1 of the mapping function--Means of Focusing or Highlighting Important Points

Typical planning document used--Annotated Text--English only; Specially marked notes or cards

Example of teacher statements

"I underline or mark the important points."

* * *

"Passages which are particularly revealing are underlined."

* * *

Subcategory 2 of the mapping function--Check of Student Work or Answers Compared to Teacher's Answers

Typical planning document used--Answer key; Hand held sheet of paper

Example of teacher statements

"These notes are a quick way to compare the student's work with the answers I've come up with."

* * *

Subcategory 3 of the mapping function--Place-holder

Typical planning document used--Dates or special marks in text, planbook or notes

Examples of teacher statements

"I mark where I left off in the text."

* * *

"I pencil in the period number next to the place in my notes or text where I stop when the bell rings."

* * *

Subcategory 4 of the mapping function--Reminder to Trigger Action of the Day of a Given Class

Typical planning document used--Notes

Examples of teacher statements

"I use my notes because I can't remember all of the rules."

* * *

"If I lose my place in the lecture, I'll walk to the front of the room and glance at my notes."

III. The Scheduling Function.

Definition--The scheduling function serves as a calendar of events beyond one week's time.

Sub-categories:

--Fixed Schedule

--Flexible Schedule

Metaphor--The prediction of time and distance yields a travel schedule. Some journey schedules are fixed, such as those which employ public transportation wherein several people are attempting to reach the same destination via the same means. Other schedules are less prescriptive as the journeyer changes arrival times to make unanticipated side trips or slows to serve the needs of fellow travelers.

Discussion--This function, as applied to written plans, emerges as similar to that of the submitted plan. Teachers reported using either or both the submitted and unsubmitted plans for flexible scheduling which they altered depending on the movement of the class or the availability of resources and materials. Other teachers reported using calendars to set up a semester or year plan that they knew would be followed on a nearly day-to-day basis.

Subcategory 1 of the Scheduling Function--Flexible Schedule

Typical planning document used--Unit plan, calendar, block plan, notes

Example of teacher statements

"I know what has to be taught in a unit, but it may not be on a specific day."

Subcategory 2 of the scheduling function--Fixed Schedule

Typical planning document used--Calendar, block plan, notes

Example of teacher statements

"My lessons go right down to the last day (note: each note sheet has a day number, e.g., Lesson III, number 7)...everything is programmed day-by-day so when we get two or three snow days, it really causes chaos in my plans 'cause I've had every day planned for the entire semester."

IV. The Logging Function.

Definition--The logging function serves as a record or journal which documents past instructional lessons in enough detail that it may be later used to assist with any or all of the other three functions of the unsubmitted plan, i.e., drawing board, mapping, scheduling.

Sub-categories:

--Log of Suggestions for the Modification of a Lesson in the Future
--Log of the Week, Unit, Semester, or Year
--Record of the Difference between Actual Instructional and the Predicted Plan
--Record of Good Problems or Ideas to be Saved for Future Lessons
--Status Check of Items Covered in a Given Period.

Metaphor--Technology has installed the instant photograph, tape recorder, and video-tape machine as the modern journeyer's log. Ages past saw the learned man record his travels in journals which were often accompanied by sketches. The log on board ships and plans recorded any characteristic of the trip which was unusual. One might imagine earlier pioneers recording better routes as they were found or warning of

pitfalls to be encountered on other paths.

Discussion--Teachers reported the written plan to be of great importance for this function. The plan provides a record of how instructional problems were solved in the past and hence contributes to the subsequent success of the three other functions in future years. The logging function is credited with documenting: ideas suggested by students; good mathematical problems; and suggested lesson modifications. Teachers attribute good logs as becoming more valuable than any text, in some instances.

The log gives the teacher a record of how the lesson differed from the predicted plan, whether submitted or unsubmitted. Finally, the unsubmitted log shares certain functions with the submitted plan, such as general documentation of what was covered when, and a check that items were taught within a given period of time; most typically, a period of time whose work is to be assessed by a test.

Subcategory of the logging function--Log of Suggestions for the Modification of a Lesson in the Future

Typical planning document used--Edited plans; Scraps of paper clipped to planbooks or placed in topical folders; Notes in text or novel margins

Example of teacher statements

"I make notes of things that worked or that should be eliminated."

* * *

Subcategory 2 of the logging function--Log of the Week, Unit, Semester, or Year

Typical planning document used--Edited planbooks, notebooks, calendars

Example of teacher statements

"I keep plans from past years to compare other class's progress."

* * *

Subcategory 3 of the logging function--Record of the Difference between Actual Instruction and the Predicted Plan

Typical planning document used--Few words of notation in the planbook or notes

Example of teacher statements

"I write down what I actually did for my own use."

* * *

Subcategory 4 of the logging function--Record of Good Problems or Ideas to be Saved for Future Lessons

Typical planning document used--notes

Example of teacher statements

"When I find a particularly good problem, I write it in my notebook."

* * *

Subcategory 5 of the logging function--Status Check of Items Covered in a Given Period

Typical plannning document used--Planbook, notes

Example of teacher statements

"I check back through my plans before writing a test.

Departmental Differences and Similarities

The Submitted Plan

The English department in School A placed less emphasis on the submitted plan as an aid to decision making than did their colleagues in the mathematics department (see Table 2). The mathematics teachers in School A emphasized the role of the submitted plan as an aid to decision making regarding the choice of problems for homogeneously grouped classes and the articulation of time for each of the next week's topics. The process of writing the planbook, motivated by the knowledge that the plans were highly regarded and used by the supervisor, seemed to assist their pre-instructional organization. Possible explanations for these differences were garnered from the interview transcripts and the context for planning. The mathematics teachers in School A felt that the predictive plan was going to be read and that they would more or less be held to it by the supervisor, hence their predictive

decisions became important to them. The mathematics teachers reported using the teacher's text and departmental schedules for their planning of time. The English department members in School A voiced a sense that the plans were not really regarded as important, hence later changes were not a serious factor. Decision making was more often done in the unsubmitted plans (see Table 4) by both English departments.

The two English departments emphasized the scheduling and logging functions. The lack of departmental schedules, or text guided schedules, coupled with the nature of the content (i.e., content by and large does not call for rigorous sequential teaching of skills for the full year as is the case in the mathematics classes) create a need for other sources to guide the teachers through the year, hence this might effect greater emphasis on the log or schedule as seen in the data gathered from both English departments.

There was less enthusiastic and unanimous response regarding the use of the submitted planbook as a log or schedule in the mathematics department of School A. Two of the four mathematics teachers in School A referred to past plans regularly. One used them sporadically, and one felt that looking back for comparison was unfair to present classes and stifled her creativity. The majority of scheduling was done through either experience, departmental schedules, or yearly calendars found in the teacher's text. All four teachers reported using the planbook to occasionally remind themselves regarding the day's topic or homework.

In spite of the difference in planning requirements, English teachers from the two schools reported that the logging and scheduling functions are regarded as important as a basis for organizing decisions about the pace and rigor of instruction. Teachers report using old plans to check whether their progress is too slow or too fast or to check whether the level of activities, assignments, and questions are appropriate compared to similar groups taught in the past. Teachers reported on schedules as being necessary since the text does not provide such a calendar, and neither department had a calendar for coverage such as those found in both mathematics departments. The schedule was also regarded as important when two or more teachers were planning to use the same novel during the year and the numbers available within the school were limited.

Because of the retrospective use of the submitted plans in School B, the reporting function's dominance within the sorting exercise was not unexpected; nor was the absence of responses in the category, aid for decision

making.

The Unsubmitted Plan

Tables 4 and 5 array the data according to department, category, and sub-category. Findings regarding the differences and similarities between the department are, at best, tentative because of the limitation of the number of schools and the sample (N=8) from each department. However, the numbers gathered from the sorting task, coupled with respondent comments, does provide some insight regarding the similarity and difference of the function of unsubmitted plans between the departments.

Drawing Board. In spite of the similarity indicated by the score of seventy-four for each department (Table 5), some differences emerge in the interviews and may be inferred from the sub-categories. English teachers emphasized continued research under the category of study. Several mathematics teachers indicated that they studied each course only during their first or second time through the course. After the initial teaching of the course, good problems and their solutions were collected and logged. This is consistent with the emphasis of the mathematics teachers on the logging function.

Mapping. Mathematics teachers made noticeably more comments regarding the importance of notes to remind the teachers about the assigned problems of the day or for the homework. English teachers placed greater emphasis on highlights written in the text which remind them to delineate passages or ideas as important.

Logging. As indicated above, the mathematics teachers interviewed make use of their written plans to record problems and lessons and to document the pace in which the curricula was taught to a specific level of students. Several instances of year-to-year comparison were reported with the mathematics teachers stressing the comparison of pace. English teachers would also comment on the logging function as helpful for them to ascertain how long they spent on a particular piece of literature.

Scheduling. English teachers appear more likely to schedule in writing for two reasons. First, they generally do not have a single student text to guide them through the year's work. (Several mathematics teachers stated that the scheduling function was taken care of by the calendar in the teacher's edition of the student text.) Second, certain novels used by English teachers, or films to be shown, are not available at any time since other teachers

may have them in use. Long-term and sometimes co-operative scheduling is necessary to ensure the availability of materials.

CONCLUSIONS AND COMMENTS

Relationship of Study to Previous Research

Jackson (1968) interviewed teachers and found that they held feelings of uneasiness regarding the potential of the lesson plan (submitted) to destroy classroom spontaneity and to impinge upon their professionalism. Interview data in this study supports the existence of these concerns among secondary school teachers. Teachers expressed their negative feelings in statements that focused on the unpredictability of the classroom environment, their self-image as professionals, and the context of the school which several contend, renders the plan book to being "busy work". The teachers' statements were limited to the predictive written submitted plan. Teachers' statements in both schools and in both departments were positive regarding the functions of unsubmitted plans and retrospective written submitted plans of the type employed by the English department in School B. The teachers who used the plans and the teachers who were asked about the feasibility of this type of submitted plan felt that such a format would provide accountability regarding subject matter coverage for supervisors and would help the teachers summarize their month's accomplishments. The retrospective plan or report did not force prediction and the teachers felt it would not be as demeaning as several teachers felt submitted predictive plans were. It should be noted that the most negative attitudes came from teachers not currently submitting plans and more ambivalent statements came from teachers who believed that their plans were read.

The document analysis and interview data support previous research (Taylor, 1970; Zahorik, 1975; Morine & Vallance, 1975; Peterson, Marx & Clark, 1978) which has criticized the Tyler rational model of planning as being non-reflective of teaching reality. The findings cast some question regarding previous theoretical and research statements which regard the "activity" as the paramount element within the plan (MacDonald, 1965; Shavelson, 1981). The data indicate that the secondary teachers studied focus on what to cover rather than on what to do. Certain basic classroom activities are so routine and so regularly repeated for both students and teachers that the teachers looked somewhat askance at the need to write these activities, even in their unsubmitted plans. What matters

to the 16 teachers studied is the material or topic of the day. This finding is complementary to the findings of Zahorik (1975) who employed a K-Adult sample of 194 teachers.

While teachers did not specify the reduction of the classroom's unpredictability as an overt function of their written plans, the statements which critiqued the usefulness of the submitted plan made clear that teachers are keenly aware of the difficulty of prediction. The documents and statements regarding the submitted plan give little evidence that they offset unpredictability, other than to assure that the teacher knows what topic he or she will teach with a given group of students (aid for decision-making). The unsubmitted plan data yield statements about notes that teachers can refer to when things are "not going well". The drawing board and mapping functions support previous statements by Doyle (1977), and Clark and Yinger (1979) that plans help teachers to make the classroom more manageable. The difference between that which is submitted and that which is unsubmitted stands out as significant since only the latter written plans were clearly associated with this predictability issue by the teachers.

The importance of accounting for the difference between the submitted and unsubmitted plans in understanding previous research and in conducting subsequent research is also indicated by the findings of McCutcheon (1980). McCutcheon's study of 12 teachers' written plans were limited to the submitted written plan. Many of the anecdotal statements about the functions of these plans (reminder, logging) reported in the McCutcheon reearch are supported by the present study. However, while McCutcheon states that much of the mental planning decisions do not appear in the planbook, she fails to account for either the existence or non-existence of other written planning artifacts which might shed light on a richer functionality of written plans for these elementary teachers. It should be noted that this reservation is not meant to question that planning is far more complex as done in the teacher's mind than it is as recorded in either the submitted or unsubmitted plans (Morine & Vallance, 1975; Morine-Dershimer, 1979; Clark & Yinger, 1979). The crucial point is that the written unsubmitted plan is richer and more complex that the planbook and hence offers a more provocative window to what Clark & Yinger have called "the hidden world of teaching", that is, teacher planning.

Clark and Yinger's findings in their series of studies of teacher planning in the elementary school is supported in several dimensions in the secondary school and in

respect to both the submitted and unsubmitted plan. Where differences occur, they appear to be attributable to the existence of the unsubmitted plan and, the pressure of content, which is prominent in the secondary school, rather than because of particular departmental or subject matter factors. The findings of Clark & Yinger (1980) are presently discussed in light of this study. Perceived differences based on the aforementioned findings should offer subsequent researchers insights for the development of hypotheses to test and possibly explain these differences.

The results of this study complement previous findings that planning (in this case, written planning) differs from traditional prescriptions for planning, such as the rational or Tyler model of planning (Clark & Yinger, 1980, p. 16). Even in the case of the unsubmitted plan, planning is largely invisible in that much of the decisions made by the teachers seem to be implicit and occur before and during the lesson. However, as stated above, more of the teachers' decisions are manifest in the unsubmitted plan as the drawing board and mapping functions are called into play. The process of writing the plans appears to be at least as functional as the product produced.

The conception of planning as being directed to daily, weekly, term, unit, and yearly planning is supported (Yinger, 1978). No evidence emerged that weekly planning was of primary importance as found by Clark and Yinger (1980). Some teachers emphasize the daily, weekly, or the unit plan as holding prominence in their scheme of personal organization.

Clark and Yinger (1980) report that teachers "plan in order to learn the subject matter themselves, to prepare or acquire needed curricular materials, and to make decisions about the content, pace, sequence, completeness, and clarity of the curricular materials they have to work with" (p. 20). The findings of this report posit the importance of the written plan as an aid for decision making (submitted) and as a drawing board (unsubmitted) as instructional problems are identified and tentative solutions are proposed. The teachers heavily weighted the function of the unsubmitted plan as being an aid for the study of content. The curricular materials are treated as part of the shared (teacher and students) unsubmitted plan in this study. Clark and Yinger do not mention the functions of reminding and logging which are significant to the teachers in this study and are indicated by McCutcheon (1980). The function of scheduling and reporting are not explicitly dealt with.

Finally, Clark and Yinger (1980) report: "The most common form of written plans was an outline or list of topics." This finding holds true for the submitted plan; however, several teachers produced highly developed longhand notes and annotated texts as unsubmitted written plans.

The findings in this study attempt to advance the existing body of knowledge in at least two ways. Previous studies have treated the topic of the function of planning as a side issue. This study provides a set of categories of planning functions for testing at the elementary and secondary level. Subsequent testing should clarify the categories and elucidate potential differences between the written plans of teachers. Secondly, this study calls to fore the written unsubmitted plan as a rich source of data regarding teacher decision-making heretofore neglected in the literature.

Discrepancies

Three issues emerged which were not resolved. The issues recurred and captured the researcher's interest in that the pieces did not fit and the data failed to offer satisfactory explanatory evidence. They are reported here in order to fully capitalize on the value of the naturalistic research design and in the hope that subsequent research will respond to them.

The first discrepancy or issue is that in both schools and in both departments, teachers meet classes of homogeneously grouped students. Statements and unsubmitted planning documents indicated that: the brighter the class, the more written notes the teacher would prepare for himself or herself.

This statement is considered discrepant since several teachers protested that they planned the same way for all students. Others endorsed the generalization as a fact which could be taken for granted. In all 16 cases however, some indication existed that the designation of class aptitude, whether by the students' behavior or the label assigned to the class, seemed to affect the quantity of writing. Time after time, teachers reported that a more extensive personal map was needed for brighter students. Being a quicker student meant the potential to challenge teacher knowledge, which in turn precipitates more study and more notes, if not more of the drawing board or decision-making function. (The decision-making appears to be a reason that several teachers balked at supporting the first of these two generalizations since the teachers claimed that more decision-making may be necessary, but the

map requires less detail.) This discrepancy might well be considered by researchers interested in the question of homogeneous versus heterogeneous grouping in the secondary level.

The second discrepancy was apparent in School A where submitted plans are required the week before instruction. The two supervisors and the principal stated that they were certain that teachers knew why plans were demanded. However, no teacher could recollect being informed regarding the reasons for the planning prescription. In spite of the commonality of the submitted product between departments and all eight teachers, there was no evidence of specific directions or administrative rationale for plans. The match between supervisor and teachers' meanings of submitted plans appeared almost non-existent in any visible form, yet the overt purpose was to act as a vehicle of communication between teacher and supervisor. The exploration of the discrepancy between supervisor and teacher perception of plans might well use the findings in this paper as a starting point regarding the common or dissimilar understanding of the functions of the submitted plans.

The third discrepancy concerns the use of previously written plans. Two teachers' positions indicate an extreme case of the discrepancy. One teacher reports that she feels that her reusing plans stifles creativity. She contends that she is less able to respond to the ability of a class if the plans were developed for other students. She writes her plans, uses them, then discards them after a test is given. The opposing position is held by a teacher who maintains an elaborate three-hole binder of notes from his first years of teaching which have been edited over the years. He feels that re-writing plans is a worthless use of time better given to students in other ways. Different variations of this issue emerged somewhere between these positions. The difference may have ramifications if it was an indication of a planning style which might be described and related to a possible effect on performance.

Implications for Future Research

It is hoped that the categories and elements will be tested for their validity with teachers in other content areas and in a greater number of schools with a larger sample of teachers. The categories accompanied by the explanatory information serve as the first systematic efforts to explain the functions of written plans. Efforts to improve or clarify each category will be valuable as the categories are scrutinized using the scientific or

quantitative paradigm.

Besides sample size and contextual delimitations, the study was delimited to teachers with a minimum of three years of experience. The mean years of experience for the 16 teachers was 12.6. The findings in this study might be fruitfully examined using a sample of novice teachers for similarities and differences. The supposition is that the documents which are submitted would be more extensive and that the drawing board and mapping functions would be elaborate and heavily weighted in importance. Similar studies of similarities and differences should be conducted using elementary school teachers. The increased emphasis on content detected by Neale & Sardo (1984) in their study of middle schools was visible in the secondary school as a primary concern. This concern could be expected to manifest itself differently as elements and functions were examined in the elementary and secondary school.

The role of the format, for example, planbook versus notebook, appears to have an effect on what goes into submitted plans; particularly in terms of the quantity of what the teacher includes. Practitioners might well profit from research which examines groups of teachers in the same school who use two or three different formats for submitted plans. Concomitant changes in elements, submitted functions, and role of unsubmitted plans would be anticipated.

Finally, it is hoped that future research will use the unsubmitted written plan as a viable and necessary source of data for the study of teacher planning.

Implications for Practice.

Several implications may merit consideration by those within schools. These considerations are based on the findings, generalizations, and discussion of the discrepancies which precede this section.

The writing of plans exists within a context of the school. The submitted plan may be said to serve as a device for communication from teacher to supervisor. It appears that where supervisors place emphasis on the plans and are known to read them (e.g. School A, mathematics), the teachers are more positive regarding the planning prescription. Teachers' comments regarding retrospective written plans were positive. It might be useful for schools and supervisors, whose needs are to assure that curriculum is being taught, to consider the use of a retrospective rather than predictive submitted plan. At a

minimum, some clear statement of the purpose of submitted plans would seem to be valuable within a school demanding submitted plans.

The fact that the predictions of teachers in School A were borne out may be valuable for schools to consider. Teachers in School A stated that if they were not forced to write plans, they would still do so. The teachers in School B, while not required to submit written plans, completed similar functions in their unsubmitted plans. Once again, this result must be viewed in light of the sample, but this case may warrant examination by both practitioners and researchers. At the minimum, the availability of unsubmitted plans may provide assurances for many supervisors that are not assuaged even by the scant submitted plan.

The logging function is regarded as important by teachers in this study. The completed planbook becomes a valuable tool for teachers' use in subsequent years. Schools who collect and keep planbooks might well want to consider the benefits and liabilities of such a policy in light of the findings and discussion above.

If the format of the planbook does influence planning, then consideration of alternative formats might be of value wherein planbooks are not meeting the functional needs of teachers or administrators. The categories contained in this study might serve as a focal point regarding the existence of these functional needs and the procedures to meet them.

If the functions of unsubmitted plans do change for teachers from an emphasis on the drawing board function to the logging function over the years that a teacher has experience, and particularly experience with a given course, then some attention and discussion to the benefits and liabilities of the change appears valuable. The product of such a discussion might include recommendations regarding teachers' similar or dissimilar course assignments over several years.

A significant item for practitioner consideration is the variation of teacher written plans for homogeneous groups. This examination of the different plans used for brighter and slower groups requires a partnership of researchers and practitioners. Researcher examination of the existence of more thorough planning for brighter students would require examination of schools whose students are grouped homogeneously and schools who group heterogeneously. Should consistent or detrimental results be found, practitioners may well want to re-think their

grouping policies in mathematics and English classes.

Finally, it is hoped that the categories of functions and the description of elements may contribute to the language of teacher educators. Teacher educators may use the categories to further develop models of planning taught to novices. Each functional category may assist prospective teachers to better organize instructional problems and then to seek and record solutions in writing. The various functions thus become tools, appropriate at particular times depending on the instructional situation in which the novice is involved. The written plan might then be more readily used as a multi-faceted resource.

The understanding of the role of the written submitted and unsubmitted plan as an organizer of pre-instructional, instructional, and post-instructional information may increase the value and efficacy of the often used teaching tool, the written plan.

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